8800 Series Applications Software Release Notes

Release Group: July 2025

Option Number	103 / 128 / 129 / 130
Option Description	Motorola APX™ Series Auto-Test and Alignment
Current Version	2.5.0

New Features
1. Added support for the N70 VHF band radio.

Option Number	112 / 113
Option Description	Tait P25 Series Auto-Test
Current Version	1.3.0

Improvements
1. Updated the radio communications.

Fixes
1. Fixed an issue where if it the radio fails to go into tune mode after being in programming mode, the script would continue and fail every test.

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Release Group: May 2025

Option Number	103 / 128 / 129 / 130
Option Description	Motorola APX™ Series Auto-Test and Alignment
Current Version	2.4.0

Improvements
2. Updated the UHF/800 reference oscillator specification.
3. Removed two 700 MHz frequencies.

Fixes
2. Corrected the front end filter gen level for the H98 A radio.

Release Group: April 2025

Option Number	114
Option Description	BK KNG Command Series Auto-Test and Alignment
Current Version	1.7.0

Improvements
1. Updated the identification to handle the new serial number format on non-BKR radios.

Fixes
1. Fixed the radio identification so it won't abort the test for unknown reasons.

Option Number	117
Option Description	L3Harris XL Series Auto-Test and Alignment
Current Version	1.9.0

Improvements
1. Expanded the XL-400P ID code range.
2. Added functionality to make sure bands that are reported as Enabled are really there.

Option Number	104
Option Description	Motorola MOTOTRBO™ Series Auto-Test and Alignment
Current Version	2.9.0

New Features
1. Added support for the R5 (H07RD, H07JD) radios.
2. Added support for the R7Ex (H57QC, H57SD) radios.
3. Added support for the second frequency table being added to new radios.

Option Number	118
Option Description	Kenwood Viking 5/6/7000 Series Auto-Test and Alignment
Current Version	1.8.0

New Features
2. Added support for the VM8000 radio.

Improvements
1. Improved the assist alignment to avoid duplicate readings.

Fixes
1. Fixed an issue with the assist target for Portable VHF radios.
2. Fixed an issue where the post reset delay wasn't always long enough.

Release Group: January 2025

Option Number	103 / 128 / 129 / 130
Option Description	Motorola APX™ Series Auto-Test and Alignment
Current Version	2.3.0

New Features
1. Added support for N radios (7/800, VHF, and UHF).
2. Added support for the M25VR radio.

Improvements
1. Set 'Reset Power Char on Align' option to off by default.

Fixes
3. Fixed an issue where the voltage limit alignment, and current limit alignment would abort if the alignment failed.
4. Some of the Tx Current, and Tx Voltage alignments were showing the wrong beginning softpot value.

Release Group: October 2024

Option Number	103 / 128 / 129 / 130
Option Description	Motorola APX™ Series Auto-Test and Alignment
Current Version	2.1.9

Fixes

1. Fixed an issue with the M37 radios not writing some softpots.
2. Fixed an issue with the M37 balance alignment.
3. Fixed an issue with the power detector alignment.

Release Group: September 2024

Option Number	117
Option Description	L3Harris XL Series Auto-Test and Alignment
Current Version	1.8.0

New Features
1. Added 900 MHz support for version R19A18.
2. Added support for the XL-85M radio.

Improvements
1. For the power tune, check the first reading to see if alignment is needed.

Fixes
1. Fixed a crash with identifying radios that do not report their model number.

Option Number	108 / 109
Option Description	Hytera DMR Series / Hytera DMR Repeater Auto-Test and Alignment
Current Version	1.5.0

New Features
1. Add PD7xx VHF 66-88 MHz radio (-V4-).
2. Added Mod sensitivity spec to the configurations to allow users to modify the Mod Sensitivity spec as needed.

Fixes
1. Due to DC offset on the audio out of the radio, test always uses the audio input 30V range.

Release Group: July 2024

Option Number	103 / 128 / 129 / 130
Option Description	Motorola APX™ Series Auto-Test and Alignment
Current Version	2.1.5

New Features
1. Added support for the M22VR 800/900 MHz band radio.

Option Number	104
Option Description	Motorola MOTOTRBO™ Series Auto-Test and Alignment
Current Version	2.8.0

Fixes
1. Fixed an issue with the R7 800/900 radios (H06UC) not using the correct frequency pairs for the Rx Duty Cycle alignment.

Option Number	111
Option Description	L3Harris P25 Series Auto-Test and Alignment
Current Version	1.5.0

New Features
1. Added support for the XG-75M 800 MHz single band radio.
2. Added support for the XG-75Pe UHF-H radio.

Option Number	118
Option Description	Kenwood Viking 5/6/7000 Series Auto-Test and Alignment
Current Version	1.7.0

Fixes
1. Fixed the TCXO frequency configuration for the VPx430 radio.

Release Group: December 2023

Option Number	Auto-Test Core – Common to all Auto-Test scripts
Current Version	2.4.8

Improvements

1. For the power tune, check the first reading to see if alignment is needed.

Option Number	114
Option Description	BK KNG Command Series Auto-Test and Alignment
Current Version	1.6.0

New Features

1. Added M150/B150 HP,7W radio.

Improvements

1. Separate the BKR5000 identification from the BKR9000 radio.
2. Change the volume set algorithm to work with all radios.
3. Add a check on old serial numbers to make sure a detected portable is not really a mobile.
4. Remove product types 28, 2E, and 2F.
5. Change product type for M150/B150 LP, M150/B150 HP, and LP7W radios.

Release Group: October 2023

Option Number	105
Option Description	Motorola XTS®/XTL™ Auto-Test and Alignment
Current Version	1.5.0

Improvements
1. Added prompt for unsupported D04, M04, and T04, ASTRO radios.
2. Removed cool down delays in tests that set the radio to low power.

Option Number	114
Option Description	BK KNG Command Series Auto-Test and Alignment
Current Version	1.5.0

New Features
1. Added five new product series.
2. Added new mobile, portable, and base types.

Improvements
1. The Reference Oscillator alignment now shows the beginning and ending softpot values on the alignment result.

Fixes
1. The DSP and BSP versions are decoded correctly.
2. The correct tuner frequency now appears in the log.
3. Audio Level function now works correctly for all radios.
4. Removed the IP address field from the option screen.
5. The M150/B150 110W radio is no longer missing the reference oscillator test configuration.

Option Number	107
Option Description	Kenwood NX-3000 / 5000 Series Auto-Test and Alignment
Current Version	1.8.0

Improvements
1. The frequency alignment is now done at -55.0 dBm on the T/R port.

Fixes
1. Removed power check code in the power alignment. This was preventing a misaligned radio from aligning.
2. Fixed an issue with TK- model identification.

Release Group: August 2023

Option Number	104
Option Description	Motorola MOTOTRBO™ Series Auto-Test and Alignment
Current Version	2.7.0

New Features
1. Added R2 radio support.

Improvements
1. For H01QD Rev C radios limit the DMR Tx Tests to 470 MHz.
2. If test fails the reference oscillator power check, added text indicating that the operator may need to run the power alignment first.

Fixes
1. Changed SLR to XLR in the mic calibration dialogs.
2. Change the frequency used for the mic calibration from 452 Hz, to 600 Hz.

Option Number	118
Option Description	Kenwood Viking 5/6/7000 Series Auto-Test and Alignment
Current Version	1.6.0

New Features
1. Added support for the VP8000 radios.

Release Group: April 2023

Option Number	118
Option Description	Kenwood Viking 5/6/7000 Series Auto-Test and Alignment
Current Version	1.5.0

New Features
1. Added abort button to the "No Pad" dialog box.
2. Moved TCXO and TX Power tests to test mode.
3. Incorporate the new algorithm for the Rx Filters alignment.

Improvements
1. Increased delays causing intermittent failures.

Release Group: March 2023

Option Number	100
Option Description	8800 AutoTest
Current Version	2.4.6

Fix
1. Changing end of test beep state in open dialog box no longer turns off extended logging.

Option Number	117
Option Description	L3Harris XL Series Auto-Test and Alignment
Current Version	1.7.0

Improvement
1. Added prompt to turn off test head before testing starts.

Fix
1. Timing fixes for the XL mobile radios.

Release Group: February 2023

Option Number	104
Option Description	Motorola MOTOTRBO™ Series Auto-Test and Alignment
Current Version	2.6.0

Improvement

1. All radios running Firmware Version R02.22.02.3001 are now supported.

Release Group: January 2023

Option Number	104
Option Description	Motorola MOTOTRBO™ Series Auto-Test and Alignment
Current Version	2.5.0

Improvement

1   Frequency lists have been updated to work with current Firmware Version R02.22.02.3001.

Release Group: June 2022

Option Number	Auto-Test Core – Common to all Auto-Test scripts
Current Version	2.4.3

Improvements
1. Now checking exit flag variable before running the next test.
2. Remove the collection of "Map" information.

Option Number	101
Option Description	Kenwood NXDN™ Series Auto-Test and Alignment
Current Version	1.4.0

Improvement
1. Renamed RPM's and directories accordingly – now named Kenwood_NX.

Fix
1. Identified and resolved an issue where when running the RF power alignment on the 720H and 820H models, the application would stop running. An unnecessary key was identified and removed from the code.

Option Number	102
Option Description	Kenwood 5x20 Series Auto-Test and Alignment
Current Version	1.4.0

Fix
1. Fixed a crash with the 'H' model NX radios.

Option Number	103 / 128 / 129 / 130
Option Description	Motorola APX™ Series Auto-Test and Alignment
Current Version	2.1.0

Improvement
1. Deviation balance units now show in Hz instead of kHz.

Fixes
1. Resolved an issue for the H97TG where power was being misaligned. Low band power was being read prior to high band power, resulting in a power characterization issue.
2. Fixed an issue with the 8500 power header information which showed power in Hz.

3. Fixed an issue with the H99KG which was reading as a UHF1 radio, but its actually a VHF radio.
4. Fixed an issue with the H99UC radio which was missing the 'Test' entry, and only showed 'Align & Test' on the Menu.
5. Fixed an issue with the H92KD VHF radio that was set to use the 700 / 800 MHz cable loss, instead of the VHF cable loss.
6. Updated "B" mobile power to 1 Watt for deviation balance alignment.

Option Number	104
Option Description	Motorola MOTOTRBO™ Series Auto-Test and Alignment
Current Version	2.3.0

New Feature
1. Added support for the R7 family of radios.

Fix
1. Added missing configurations for 7/800 and UHF ION radios.

Option Number	105
Option Description	Motorola ASTRO®25 Series Auto-Test and Alignment
Current Version	1.4.0

Fix
1. Resolved an issue with the XTL™ current limit alignment.

Option Number	107
Option Description	Kenwood NX-3000 / 5000 Series Auto-Test and Alignment
Current Version	1.7.0

New Feature
1. Added a check for unprogrammed channels when running tests, as the test frequency list can be changed by the end user.

Fix
1. Resolved an issue where occasionally Tx tests would fail the first frequency. This would happen because the operating system would fail to update appropriately to NXDN.

Option Number	108 / 109
Option Description	Hytera DMR Series / Hytera DMR Repeater Auto-Test and Alignment
Current Version	1.4.0

Fix
1. Fixed an issue where if a floating point value was entered into the "Extn Atten" field on the cable loss screen, the application would stop working.

Option Number	111
Option Description	L3Harris P25 Series Auto-Test and Alignment
Current Version	1.4.0

Fixes
1. Field report of RSSI alignment issues on the XG-15P. Modified the TPS so the alignment is now done with the AGC enabled to resolve this issue.
2. Fixed an issue where the narrowband TCG, and DCG tests were only testing 5 of the 6 frequencies.

Option Number	114
Option Description	BK KNG Command Series Auto-Test and Alignment
Current Version	1.4.0

New Feature
1. Added support for the BKR5000.

Improvements
1. Zone prompt includes the channel.
2. Rx BER test now sets the port to T/R.

Fix
1. Exclude VHF radios from the IF Match Tune alignment.

Option Number	117
Option Description	L3Harris XL Series Auto-Test and Alignment
Current Version	1.6.0

New Feature
1. Added support for the L3H XL-400P.

Improvement
1. Updated mobile radio low power targets for firmware version R12D07.

Release Group: February 2022

Option Number	Auto-Test Core – Common to all Auto-Test scripts
Current Version	2.4.1

New Features
1. Added support for new DMR generator patterns SILENCE, PN9DS, and PN9VS.

Option Number	104
Option Description	Motorola MOTOTRBO™ Series Auto-Test and Alignment
Current Version	2.2.0

New Features
1. Added support for ION model radios.
2. Added ADC alignment.

Fixes
1. Fixed an issue in which newer firmware could cause the USB device to disappear if the Transmit Tests were run.
2. Fixed an issue that would cause the Transmit Modulation Balance test to report "No Power Detected".

Option Number	107
Option Description	Kenwood NX-3000 / 5000 Series Auto-Test and Alignment
Current Version	1.6.0

New Features
1. Added DMR Receive BER tests. Tests are now available with 8800s running system software 2.4.5 or greater, and AutotestCore version 2.4.1 or greater.

Release Group: August 2021

Option Number	107
Option Description	Kenwood NX-3000 / 5000 Series Auto-Test and Alignment
Current Version	1.5.0

New Features
1. Added support for NX3400, NX3920, NX-3921, NX-5600H, NX-5700H, NX-5800H, and NX-5800T radios.
2. High power radios (NX-5600H, NX-5700H, and NX-5800H) require a 6 dB attenuator for power alignment and tests will be skipped.
    a. If no attenuator is used with these models, a notification will appear that power alignment and tests will be skipped.

Improvements
1. If the radio supports a digital protocol that is not installed on the 8800, testing for that protocol will be skipped.
2. Alignment values for the RSSI Reference alignment are now displayed on the test result.
3. When audio testing is skipped, the test results now show "No Audio" for the skipped tests.

Fixes
1. Fixed an issue with the NX-3000 where Ramp Offset, RSSI, or Squelch alignments would halt the test.
2. Fixed an issue with the NX-5800 stopping at the start of the RSSI test.

Release Group: June 2021

Option Number	101
Option Description	Kenwood NXDN™ Series Auto-Test and Alignment
Current Version	1.3.0

New Features
1. Added support for NX-920 and NX-920G radios.

Fixes
1. Resolved an issue with the test reporting that the NX-820K2 radio was unsupported.
2. Fixed an issue where incorrect tests were skipped when "No Audio" was selected.

Option Number	102
Option Description	Kenwood 5x20 Series Auto-Test and Alignment
Current Version	1.3.0

Fixes
1. Fixed an issue where incorrect tests were skipped when "No Audio" was selected.

Option Number	103 / 128 / 129 / 130
Option Description	Motorola APX™ Series Auto-Test and Alignment
Current Version	2.0.2

Fixes
1. Fixed an issue with L37TS radios failing the Rx Duty Cycle alignment.
2. Resolved an issue with the test halting during low power testing of M30TS radios.

Option Number	105
Option Description	Motorola ASTRO®25 Series Auto-Test and Alignment
Current Version	1.3.0

Improvements
1. Added cool down periods for mobiles during alignments.
2. Updated the frequency list for VHF 100 W radios.

Option Number	112
Option Description	Tait P25 Series Auto-Test
Current Version	1.2.0

New Features
1. Updated version to support Tait DMR Series Auto-Test.

Option Number	113
Option Description	Tait DMR Series Auto-Test
Current Version	1.2.0

New Features
1. Added support for TP9300 HB, TM9300 HB LP, TM9300 HB HP, and TP9500 HB radios.

Option Number	115
Option Description	EF Johnson Viking Series Auto-Test and Alignment
Current Version	1.2.0

Improvements
1. The TCXO calibration specifications have been updated for VP400 and VP600 700 / 800 MHz band radios.
2. The default Rx BER level has been changed to -117 dBm.

Fixes
1. Fixed an issue with some 700 / 800 MHz band radios not completing testing.

Option Number	117
Option Description	L3Harris XL Series Auto-Test and Alignment
Current Version	1.5.2

Fixes
1. Fixed an issue with some radios being misidentified as multiband that caused incorrect bands to be tested.

Release Group: Late May 2021

Option Number	103 / 128 / 129 / 130
Option Description	Motorola APX™ Series Auto-Test and Alignment
Current Version	2.0.0

New Features
1. Added support for APX 4000XH and APX NEXT (H45TG) radios.

Fixes
1. Fixed an issue with the PA Bias alignment for B model radios.
2. Fixed an issue with the L37TS where power alignment would fail and the test would stop during balance alignment.

Option Number	104
Option Description	Motorola MOTOTRBO Series Auto-Test and Alignment
Current Version	2.1.0

New Features
1. Added support for H55PD, H87JD, H87ND, and H87YD radios.

Improvements
1. The test result filename will now show the test type, i.e. -Test or -AlignTest.

Fixes
1. Fixed an issue with the Q and Y band radios not completing the power test.

Release Group: Early May 2021

Option Number	117
Option Description	L3Harris XL Series Auto-Test and Alignment
Current Version	1.5.0

New Features
1. Added support for XL-95P, XL-185M, and XL-200M radios.

Improvements
1. Radio models are now shown on the test results.

Option Number	111
Option Description	L3Harris P25 Series Auto-Test and Alignment
Current Version	1.3.0

New Features
1. Added support for XG-100M radios.

Improvements
1. If the radio fails to enter test mode due to being on a trunked channel, a prompt will now appear for the user to set the radio to a conventional channel.

Fixes
1. Fixed an issue where an XG-15P with older firmware identified as XG-15 which prevented the test from running.

Release Group: April 2021

Option Number	114
Option Description	BK KNG Command Series Auto-Test and Alignment
Current Version	1.3.0

New Features

1. Added support for new M150 and P150 hardware types.

Improvements

1. Updated alignment and test limits for mobiles that have a 7 Watt low power range.
2. Added retries to the Rx Sensitivity test.

Release Group: March 2021

Option Number	118
Option Description	Kenwood Viking 5/6/7000 Series Auto-Test and Alignment
Current Version	1.4.0

New Features

1. Starting with radio firmware 8.32.0, the radio will no longer need to be set to a conventional channel.

Improvements

1. The model name for VHF Low Band has been updated from VMx730 to VMx630H, and high-power VHF from VMx730 to VMx730H.

Release Group: October 2020

Option Number	Auto-Test Core – Common to all Auto-Test scripts
Current Version	2.4.0

Fixes

1. Fixed an issue preventing tests from running and the Cable Loss screen displaying if the AutoTestResults directory is missing.

Release Group: Late September 2020

Option Number	112
Option Description	Tait P25 Series Auto-Test
Current Version	1.1.0

New Features
1. Now supports TP9600 radios.

Improvements
1. Frequency error limit has been updated to +2.5 ppm.
2. Trying to test a Tait DMR radio will display a message that DMR radios are not supported in the P25 script.
3. Headers have been added to show the power level being tested.

Fixes
1. Increased audio output from the radio during the sensitivity test.
2. Fixed an issue with radios intermittently not being recognized by the Auto-Test.
3. Fixed an issue with the radio transmitting high power during the very low power test.

Option Number	113
Option Description	Tait DMR Series Auto-Test
Current Version	1.1.0

New Features
1. Now supports TP9500 radios.

Improvements
1. Frequency error limit has been updated to +2.5 ppm.
2. Trying to test a Tait P25 radio will display a message that P25 radios are not supported in the DMR script.
3. Headers have been added to show the power level being tested.

Fixes
1. Resolved an issue causing intermittent failures during the DMR parametrics test.
2. Increased audio output from the radio during the sensitivity test.
3. Fixed an issue with radios intermittently not being recognized by the Auto-Test.
4. The TP9355 H7 radio will now call up the correct power specifications.
5. Fixed an issue with the radio transmitting high power during the very low power test.

Release Group: Early September 2020

Option Number	118
Option Description	Kenwood Viking 5/6/7000 Series Auto-Test and Alignment
Current Version	1.3.0

New Features
1. Now supports:
    a. VM5730H high power VHF
    b. VM6000 series
    c. VM7000 series
2. To support new radios, the model selections are listed with an x in place of the first model number, e.g. VM5730 will be displayed as VMx730.
3. High power (110 Watt) radios require a 6 or a 10 dB external attenuator for power tests. If this external loss is not entered in the Cable Loss screen, power tests are skipped and a prompt is displayed to use an attenuator.

Improvements
1. Added Conventional Zone and Conventional Channel selections to the Radio Information menu to specify what channel will be used for testing. A message will display if the radio is not set to a conventional channel.

Fixes
1. If "No Audio" is not selected, the test will now fail if no audio is detected from the radio instead of being skipped.
2. Resolved an issue where the radio was not reset when the Asset alignment failed, preventing the next alignment from running.

Release Group: Late August 2020

Option Number	Auto-Test Core – Common to all Auto-Test scripts
Current Version	2.3.7

Improvements
1. To prevent the results database from growing too large, when the database reaches a size larger than 28 MB it will be backed up to a new database file with timestamp in the filename. A check database message will display as well as a message stating the backup is occurring.

Option Number	103 / 128 / 129
Option Description	Motorola APX™ Series Auto-Test and Alignment
Current Version	1.8.2

New Features
1. Now supports APX 4500 and 6500 "B" models and APX 8500 consolette models.

Improvements
1. Current and voltage limits are now set to the maximum during Power Detector alignment for mobiles.

Option Number	105
Option Description	Motorola ASTRO®25 Series Auto-Test and Alignment
Current Version	1.2.9

Fixes
1. The radio firmware length limit has been removed, so the whole version is now displayed.

Option Number	117
Option Description	L3Harris XL Series Auto-Test and Alignment
Current Version	1.4.0

Improvements
1. The RSSI alignment now works with "NoRFDSP" radios with firmware R10C12 and higher.

Option Number	130

Option Description	Motorola APX NEXT™ Series Auto-Test and Alignment
Current Version	1.8.2

New Features

1. This is the initial release which supports testing of APX NEXT Series radios.

Release Group: Early August 2020

Option Number	111
Option Description	L3Harris P25 Series Auto-Test and Alignment
Current Version	1.2.0

New Features
1. Now supports XG-15P, XG-25M, and XG-25P models.
   a. These radios support the following tests and alignments: Reference Oscillator, Rx RSSI, Tx Power, Rx BER, and P25 Tx Test.

Improvements
1. Power alignment for the 7/800 band have been updated to match the service manual.

Fixes
1. Resolved an issue where the radio was not recognized if it was in Burn App mode.
2. Fixed an abort condition caused by no data being received from the radio during the Rx BER test.

Release Group: June 2020

Option Number	117
Option Description	L3Harris XL Series Auto-Test and Alignment
Current Version	1.3.0

Improvements

1. The Rx RSSI Alignment step is automatically skipped for "NoRFDSP" radio versions which do not support this.

Release Group: May 2020

Software Description	Auto-Test Core – Common to all Auto-Test scripts
Current Version	2.3.5

Fixes
1. Fixed an issue where the message beep continued after the message box was dismissed.

Option Number	115
Option Description	EF Johnson Viking Series Auto-Test and Alignment
Current Version	1.1.0

Improvements
1. The test result filename now contains the full radio serial number.
2. The radio model is now fully displayed in the test result filename (i.e. VM900), previously only VM or VP was shown.
3. Improved the Rx BER calculation made to reduce false failures.

Fixes
1. Resolved an issue where sometimes the VHF band power test would fail when ran after the TCXO Frequency test.

Option Number	107
Option Description	Kenwood NX-3000 / 5000 Series Auto-Test and Alignment
Current Version	1.3.0

Improvements
1. More descriptive headers have been added to the test results for Tx Power Align and Tx Power Test.
2. Digital protocols are now read from the radio; disabled protocols will not be tested even if selected in the Options menu.
3. The beginning softpot value is displayed for frequency alignment.
4. Changed all power limits to either +/- 10%, or +/- 0.2 W, whichever is greater.

Fixes
1. Corrected an issue where the NX-3700 and NX-3800 power alignment testing the final reading to portable tolerances.
2. Sometimes cable loss was shown as "none" for Rx BER Test but has now been fixed.
3. Resolved an issue with NX-3720 and NX-3820 bands being incorrect, causing failures with IQ Phase Alignment, RSSI Alignment, and Rx Squelch Alignment.
4. Power target configurations have been corrected.

Release Group: April 2020

Software Description	Auto-Test Core – Common to all Auto-Test scripts
Current Version	2.3.4

Improvements
1. The message beep volume can be adjusted in the System Menu setting for Audio Volume. If the volume is set to less than 15%, it will be set by the Auto-Test to this minimum level.

Fixes
1. Fixed an issue where the message beep continued after the message box was dismissed.

Option Number	105
Option Description	Motorola ASTRO®25 Series Auto-Test and Alignment
Current Version	1.2.7

Improvements
1. During power characterization and power, timing has been updated to accommodate XTL2500 mobiles taking longer to key up.

Option Number	107
Option Description	Kenwood NX-3000 / 5000 Series Auto-Test and Alignment
Current Version	1.2.3

Improvements
1. Due to the high audio output level of NX-3000 Series radios, the voltage threshold has been increased for volume adjustment.
2. The user can now select which digital protocols they want to test by selecting them in the Options tab. If no digital protocols are selected, a message prompting their selection will appear while the Auto-Test performs initial analog tests.

Option Number	118
Option Description	Kenwood Viking 5000 / 6000 Series Auto-Test and Alignment
Current Version	1.1.0

New Features
1. This is the initial release, which supports testing of Kenwood Viking Series portables and mobile radios.
2. Includes the following tests and alignments: Assist, Rx Filters, TCXO Frequency, Tx Modulation, Tx Power, Rx Squelch, Tx Parametrics, and Rx BER.
3. The following radio models are supported: VM5730, VM5830, VM5930, VP5230, VP5330, VP5430, VP6330, and VP6430.

Release Group: November 2019

Option Number	112
Option Description	Tait P25 Series Auto-Test
Current Version	1.0.0

New Features
1. This is the initial release, which supports testing of Tait P25 series portable and mobile radios.
2. Includes the following tests: Tx frequency error, broadband power, P25, Tx tests, and Rx analog sensitivity.
3. The following radio models are supported: TM9100, TM9400, TP9100, and TP9400.

Option Number	113
Option Description	Tait DMR Series Auto-Test
Current Version	1.0.0

New Features
1. This is the initial release, which supports testing of Tait DMR series portable and mobile radios.
2. Includes the following tests: Tx frequency error, broadband power, DMR Tx tests, and Rx analog sensitivity.
3. The following radio models are supported: TM9300 and TP9300.

Option Number	117
Option Description	Harris XL Series Auto-Test and Alignment
Current Version	1.2.0

New Features
1. Support has been added for XL-185 radios.

Improvements
1. The Auto-Test application name has been changed from XL-200 to XL-Portable.
2. Bands being tested are now displayed in the radio information block.

Fixes
1. Fixed an issue with radios using R08C03 firmware not getting set to their original mission at the end of the test.

Release Group: October 2019

Software Description	Auto-Test Core – Common to all Auto-Test scripts
Current Version	2.3.2

Improvements
1. Previously the first time an Auto-Test was ran, a reboot needed to be performed to rebuild the database file. This will no longer be necessary unless the database is deleted.

Fixes
1. Improved behavior with the end of test and other message beeps not working.

Option Number	111
Option Description	Harris P25 Series Auto-Test and Alignment
Current Version	1.1.0

New Features
1. Now supports M5300 800 MHz band radios.

Improvements
1. For mobiles the Tx Power test now only tests the aligned frequencies, per the service manual.
2. The Tx Power test will be skipped for 110 W radios if the 6 dB external attenuator value is not entered in on the Cable Loss screen. When the test is skipped, a prompt appears to have the user connect the attenuator and enter the loss value in order to run the test.
3. Updated targets for Tx TCG Deviation and Tx C4FM from the service manual.

Fixes
1. Resolved an issue with R06L07 radio firmware that caused Rx BER test failures.
2. Some mobiles would incorrectly report 55 W instead of 50 W for max power; this has been fixed.
3. Fixed an issue with XG-75 700 / 800 MHz radios aborting the power test.

Option Number	108 / 109
Option Description	Hytera DMR Series / Hytera DMR Repeater Auto-Test and Alignment
Current Version	1.3.0

New Features
1. Now supports MD65x, PD5xx UHF3, and PD9xx Series radios.
    a. For MD65x radios, the front panel programming USB cable must be used; the test cable USB connection cannot be used.
2. Hytera DMR repeaters are now supported with Option 109.
    a. The following repeater models are supported: RD62x, RD96x, and RD98x.
    b. For repeater testing, a 40 dB external attenuator (part number 140227) must be connected to the ANT port.

Improvements
1. When no external attenuator value is entered on the cable loss screen, a notification is displayed that the Squelch Open and Squelch Off tests will be skipped.
2. For repeaters a dual cable loss control has been added.
3. Tx Deviation and Tx Modulation tests have been combined into one Tx Modulation test.
4. The open close squelch specifications have been updated to -118 dBm for open and -129 dBm for close.
5. Portable Tx Mod Sensitivity specification has been changed from +1.5 mV to +3.0 mV.

Release Group: September 2019

Software Description	Auto-Test Core – Common to all Auto-Test scripts
Current Version	2.3.1

Improvements

1. When the Auto-Test skips a test, the test title will be displayed with a skipped message in the test result. Previously just the skipped message was displayed.

Option Number	103 / 128 / 129
Option Description	Motorola APX™ Auto-Test and Alignment
Current Version	1.6.9

Improvements

1. To avoid issues with tightened reference oscillator tolerance, increased tuner setup delay for frequency alignment.
2. For power characterization, the setup delay has been increased to improve power measurements for APX 900 radios.

Fixes

1. Fixed a condition where power characterization would pass without aligning the radio.

Option Number	107
Option Description	Kenwood NX-5x00 / TK 5x30 Series Auto-Test / Alignment
Current Version	1.2.0

New Features

1. Now supports the following NX-3x00 Series radios: NX-3200, NX-3220, NX-3300, NX-3320, NX-3720E, NX-3820, NX-3820E.
2. Added the IQ phase alignment for NX-3x00 radios.

Improvements

1. DMR can now be tested in Tx Parametrics. This will need to be enabled for DMR optioned radios. To do this, go to the Tests tab, select Configure for Tx Parametrics, and select Enable.
2. Now supports DMR Rx BER test.

Fixes

1. Corrected tolerances used for sensitivity on the NX-5800, which may have caused the test to fail.

Release Group: August 2019

Option Number	104
Option Description	Motorola MOTOTRBO™ Series Auto-Test / Alignment
Current Version	2.0.0

Improvements

1. During mobile testing, if the power target appears to be off from the CPS programmed value, a "wrong target" message was displayed. We no longer display this message unless the power test fails.
2. For all regions except "AZ", we now skip the 479.95 MHz frequency.
3. High power alignment is now limited to 2.2 Watts for the 479.95 MHz frequency.

Fixes

1. Now works correctly with Q and Y band radios; previously these radios would abort the alignment.

Release Group: May 2019

Software Description	Auto-Test Core – Common to all Auto-Test scripts
Current Version	2.2.3

1. Enhancements made to error logging.

Option Number	107
Option Description	Kenwood NX-5x00 / TK 5x30 Series Auto-Test and Alignment
Current Version	1.1.1

1. Removed popup prompt for Audio tests; now tests for audio input and will adjust or prompt to skip audio.
2. Resolved issues with Tx/Rx Assist and Tx Power that could cause an abort.
3. Improvements made to Rx Squelch alignment.
4. Fixed issues with Rx RSSI alignment.
5. Removed Sensitivity alignment from menu.
6. Created configurations for setting RF Gen Level for Rx SINAD and Rx BER.
7. Improved test time for Rx sensitivity tests and alignments.

Option Number	103 / 128 / 129
Option Description	Motorola APX™ Auto-Test and Alignment
Current Version	1.6.7

1. Updated frequencies for APX900 models.

Release Group: March 2019

Software Description	Auto-Test Core – Common to all Auto-Test scripts
Current Version	2.1.6

1. Resolved an issue with removing test result files from the directory.
2. Resolved various data base issues (.db) files.
3. A reboot will now be required if the application specific database file is not present in the applications Auto-Test results directory.

Option Number	114
Option Description	KNG Command / KNG2 Series Auto-Test and Alignment
Current Version	1.2.0

1. Removed requirement for 6 dB external attenuator for M150 50W mobile radio power alignment.
2. Modified Transmit Power curve alignment method.
3. Modified the order for Transmit High, Mid and Low power alignment and Test.
4. Added support for Base radios.
5. Enable TX Modulation test for radios running firmware 2.3.0 and above.

Option Number	105
Option Description	Motorola ASTRO®25 Auto-Test and Alignment
Current Version	1.2.5

1. Corrected an issue with RS-232 / USB cables not releasing resources after test.

Option Number	103 / 128 / 129
Option Description	Motorola APX Auto-Test and Alignment
Current Version	1.6.4

1. Updated frequency for H98UC B model RX Duty Cycle alignment.
2. Corrected Power Characterization Points alignment for APX 8000H.
3. Improved Power Characterization Alignment.
4. Tightened Reference Oscillator Alignment tolerance.
5. Resolved an issue with PA Bias 3 on the APX 8500.

Release Group: December 3, 2018

Option Number	101 / 102
Option Description	Kenwood 5x20 and NXDN Series Auto-Test and Alignment
Current Version	1.2.0

1. Resolved an issue with Frequency Test and Alignment.
2. Added Power specification changes for NX-800 models.
3. Improved the results printout for the RF Power Test.
4. Now printing P25 High Power results.
5. TX/RX Assist now shows Pass/Fail status of each result.
6. If TX/RX Assist fails, data will not be written to the radio.
7. Resolved issue with TX/RX Assist on the NX-820 radios.
8. Changed test frequencies for the NX-820HG radio.
9. Added Single Tone Deviation alignment for Mobiles.
10. Resolved an issue with the RTC alignment.

Auto-Test System
1. Minor bug fixes and enhancements.

Release Group: November 9, 2018

Option Number	103
Option Description	Motorola APX Auto-Test and Alignment
Current Version	1.6.1

1. Added support for APX 900 model.
2. Added support for APX 8000H model.

Option Number	105
Option Description	Motorola ASTRO 25 Auto-Test and Alignment
Current Version	1.2.3

1. Resolved issue with older XTL 1500 PA Bias alignments.

Option Number	115
Option Description	EF Johnson Viking Series Auto-Test and Alignment
Current Version	1.0.7

1. Minor bug fixes.

Auto-Test System
1. Minor bug fixes.

Release Group: October 5, 2018

Option Number	105
Option Description	Motorola ASTRO 25 Auto-Test and Alignment
Current Version	1.2.0

1. Altered the PA Bias alignment procedure for the M28SS
2. Added symbol deviation to the P25 test specifications.

Option Number	104
Option Description	Motorola MOTOTRBO™ Auto-Test and Alignment
Current Version	1.9.0

1. Fixed a crash with the SL high tier code detection.
2. Added support for Asian models that can have longer model numbers.
3. Removed front end filter alignment from some models that do not support it.
4. Added support for new models: H01ND, H01YD, H88YC, H02KD, H02ND, H56KD, H56ND, H69ND, H87YD, H01XD, H56RC, H81XC, M28KR, M28PN, M28PR.
5. Added DP4600e model name support.
6. Optimized Reference Oscillator alignment.
7. Removed mid power test and alignment on SL 800 and 900 MHz radios.
8. Added an operator prompt to check entered specifications if target values may be different than what the radio is programmed for.

Option Number	114
Option Description	KNG CMD Series Auto-Test and Alignment
Current Version	1.1.0

1. Now retrieves the IP from the options (User entry in OEM options tab)
2. Setup configurations for Rx Ber Test allowing entry of channel, zone, RF level and pass/fail percent for test
3. Changed configurations for P25 Tx test.
4. Added new radio product types.
5. Added new M150 7W low power radios.
6. Added ability to detect model type for all versions of radio firmware.
7. Added the Tx Power Test to the Align & Test menu.
8. Added the Tx Mod Deviation Test to the Align & Test menu.
9. Added the Rx Sensitivity Test to the Align & Test menu.
10. Moved the 'Channel' and 'Zone' configuration settings from the P25 Tx Tests, and Rx BER Test to the Radio Information configuration.
11. Added a 'Zone Prompt' configuration setting to enable or disable the prompt to switch to the configured zone.
12. The "transmit mode" prompt has been changed to reference the PTT switch state "ON" or "OFF".

13. The "PTT" prompt is now displayed at the top of the Tx Mod Deviation test, and the switch is momentarily switched on, and back off once.
14. Add the "Load Radio Defaults" capability to the script. There is a new OEM option to enable restoring the radio to defaults. Selecting this, and then running the script will prompt to restore the radio to defaults.
15. Removed the "pad required" prompts from the individual tests, and replaced them with one prompt at the beginning, letting the user know that with no pad connected certain tests will be skipped.
16. The "no pad" prompt will only be displayed if a test is selected that requires the pad.
17. Fixed an issue with the front-end tuning curve alignment.
18. Fixed an issue with the generator level in the squelch alignment.
19. Fixed an issue with the Pass/Fail status of the power alignment.
20. The prompt to select between an M150 50W, and M150LP radio was missing. By adding this the M150LP radio will now be handled correctly.
21. Fixed an issue where if Abort is pressed during the VCO Tx Coarse Tune alignment, the power softpots were being left at 0 causing the radio to not key up.
22. Fixed an issue with the VCO Mod Sensitivity alignment on the 800 MHz radios where the high band (851-870 MHz) data was not being saved.

Option Number	115
Option Description	EF Johnson Viking Series Auto-Test and Alignment
Current Version	1.0.6

1. Added a retry when putting the radio into Tune Mode.
2. Improved Squelch alignment routine.

Option Number	117
Option Description	Harris XL-200 Auto-Test and Alignment
Current Version	1.1.0

1. Add the Tx Power Test, Tx CG Deviation Test, and Tx Digital Deviation Test to the Align & Test menu.
2. Set the printout frequency format for 3 digits of resolution.
3. Fixed a crash that would happen whenever the RSSI alignment failed.
4. Add check for false positives when checking for interference on the RSSI alignment.
5. Fixed an issue where the global frequency list was being modified during the power test, causing the Rx BER test to crash.

Release Group: April 13, 2018

Option Number	103
Option Description	Motorola APX Auto-Test and Alignment
Current Version	1.4.4

1. Added APX 1000 Power Alignment
2. Added APX 8500
3. Resolved issue with Front End Filter alignment
4. Improved alignment process for Power Characterization
5. Improved alignment process for PA Saturation alignment
6. Adjusted power specifications to mirror 3920 at 10%
7. Improved repeatability of H91 Front End Filter alignment
8. Corrected frequency for H98K B model radios
9. Corrected 800 MHz target for PA Saturation
10. Corrected abort condition for power detector alignment on APX 4500
11. H52QD is now a separate menu item

Option Number	105
Option Description	Motorola XTS®/XTL™ Auto-Test and Alignment
Current Version	1.1.8

1. Adjusted power specifications to 10%
2. Added Front End Filter alignment to H19Q, H19S, H18Q and H18S models
3. Retest Failed RX BER on last channel with offset
4. Adjusted power specifications to 10%
5. Added Front End Filter alignment to H19Q, H19S, H18Q and H18S models
6. Retest Failed RX BER on last channel with offset

Option Number	114
Option Description	KNG CMD Series Auto-Test and Alignment
Current Version	1.0.0

1. This is the initial release for this new application.

Relm KNG Command / KNG2 Product support list				
Model Number List	Model Name	Type	Power	Band
KNG	P800	Portable		800
KNG2	P400	Portable		UHF1
KNG Tier 2	P500	Portable		UHF2
KNG Tier 3	P150	Portable		VHF
KNG Command	M800	Mobile		800
	M400	Mobile		UHF1
	M500	Mobile		UHF2
	M150	Mobile	55/44/30	VHF
	M150	Mobile	110/60/30	VHF
	M150LP	Mobile	50/30/1.05	VHF

Release Group: November 1, 2017

Option Number	103
Option Description	Motorola APX Auto-Test and Alignment
Current Version	1.4.1

1. Added the model APX 8500 mobile.
2. Corrected a test frequency for the H98K B model radios (167.075 – 167.125).
3. Changed the 800 MHz target PA Saturation value.
4. Corrected an abort condition for Power Detector alignment on the APX 4500.
5. Modified Front End Filter alignment for models H52Q, H51Q and H59Q radios.
6. Operator is now prompted to move the cable to the GEN port on BN model radios.
7. Added models H84UC, H84SD and H84KD to the menu selection.
8. Changed testing specification for M UHF2 Hip Power radio.
9. M30TS and M30TX models are now band specific.
10. Added the model APX 8500 mobile.
11. Corrected a test frequency for the H98K B model radios (167.075 – 167.125).
12. Changed the 800 MHz target PA Saturation value.
13. Corrected an abort condition for Power Detector alignment on the APX 4500.
14. Modified Front End Filter alignment for models H52Q, H51Q and H59Q radios.
15. Operator is now prompted to move the cable to the GEN port on BN model radios.
16. Added models H84UC, H84SD and H84KD to the menu selection.
17. Changed testing specification for M UHF2 Hip Power radio.
18. M30TS and M30TX models are now band specific.

Option Number	107
Option Description	Kenwood NX-5x00/TK 5x30 Auto-Test and Alignment
Current Version	1.0.0

1. This is the initial Release for this application.
2. Models supported: NX-5200, NX-5300, NX-5400, NX-5700, NX-5800, NX-5900, TK-5230, TK-5330, TK-5430, TK-5730, TK-5830, TK-5930

Option Number	111
Option Description	Harris P25 Series Auto-Test and Alignment
Current Version	1.0.0

1. This is the initial Release for this application.
2. Models supported: P5500, P7300, XG-75, XG-75Pe, XG-75M, M7300

Option Number	117
Option Description	Harris XL-200P Series Auto-Test and Alignment
Current Version	1.0.0

1. This is the initial Release for this application.
2. Models Supported: XL-200P

Release Group: October 3, 2017

Option Number	104
Option Description	MOTOTRBO Auto-Test and Alignment
Current Version	1.8.0

1. Enabled high power test on the H55UC CSA (XPR (6580 IS).
2. Enabled power alignment on all XPR6580 IS models.
3. Added model name detection for XPR 7580e IS radio.
4. Removed extra line feeds in printouts.
5. Added retry on RX BER test failure.
6. Resolved a model dependent issue with RX Rated Volume alignment.

Option Number	108
Option Description	Hytera DMR Series Auto-Test and Alignment
Current Version	1.2.0

1. This is the initial release of this application.

Release Group: February 15, 2017

Option Number	115
Option Description	EF Johnson Viking Series Auto-Test and Alignment
Current Version	1.0.2

1. This option provided automated test and alignment for EF Johnson Viking radio models: VP400, VP600, VP900, VM400, VM600 and VM900. This is the initial release of this new option.

Option Number	128
Option Description	APX 8000 Auto-Test and Alignment
Current Version	1.2.6

1. This option adds the APX 8000 to the model list supported by OPT103.

Option Number	129
Option Description	APX "B" model Series
Current Version	1.2.6

1. This option adds the APX "B" models to the list supported by OPT103.

Option Number	105
Option Description	Motorola XTS/XTL Auto-Test and Alignment
Current Version	1.1.4

1. Resolved issues with 900 MHz band models
2. Improvements to Deviation Balance and Limiting alignments
3. Added support for M79K and Q models
4. Improved PA Bias Alignment for L20SS models
5. Added Mid Power test and alignment for specific models
6. Corrected specifications for UHF2 band mobiles
7. Resolved Frequency List error for M21QS mobiles

Option Number	103
Option Description	Motorola APX Auto-Test and Alignment
Current Version	1.2.6

1. Added support for options 128 and 129
2. Modifications to PA Bias alignment of APX 1500, 2500 and 4500
3. Changed PA Saturation target for frequencies above 805 MHz
4. Added menu selection for dual band VHF/7-800 band radios
5. Modified Front End Filter alignment for APX 1000 / 3000 models
6. Improved power alignment all models
7. Front End Filter alignment improved for APX 8000 models
8. Added support for 900 MHz band radios
9. Improved deviation balance alignment
10. Made corrections for model H51W

Option Number	104
Option Description	Motorola MOTOTRBO Automatic Test and Alignment
Current Version	1.6.0

1. Modifications to RX Rated Volume
2. Modifications to Front End Filter alignment
3. Added support for Refresh models
4. Added support for Refresh SL 3W radios
5. Resolved issue with M27TR model power alignment
6. Added detection of Current Shunt for alignments that require it
7. Deviation injection levels have been modified for Refresh models
8. Resolved issue with writing Rated Volume values to R02.60.03 version radios

Option Number	102
Option Description	Kenwood 5x20 Series Auto-Test and Alignment
Current Version	1.0.9

1. Improved the radio model identification method
2. Resolved issue with cable loss correction on specific bands
3. Improved repeatability

Option Number	101
Option Description	Kenwood NX Series Auto-Test and Alignment
Current Version	1.0.9

1. Improved the radio model identification method
2. Test Frequency lists are now read from the radio
3. Improved repeatability